AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method of processing a pixel of a digital image, the method comprising:

applying a tone mapping function to a first color channel of the pixel, the first color channel most closely matching relative luminance response of the human visual system;

computing scale factors for other channels of the pixel, the scale factors computed according to noise balancing terms and a change in value of the first color channel; and

applying the scale factors to the other color channels of the pixel.

2. (Original) The method of claim 1, wherein the color channels correspond to a positive linear color space.

3. (Previously presented) The method of claim 1, wherein the noise balancing terms are a triplet of numbers proportional to a white point of a color space of the channels .

4. (Cancelled)

5. (Currently amended) The method of method of claim [4] 1, wherein the first color channel is denoted by A_L and the other channels are denoted by A_K; and ~~wherein a noise balancing term is added to each color channel,~~ wherein the A_k color channels are transformed according to $A'_k = (A_k + A_{k(noise)}) / (A_L + A_{L(noise)}) \times A'_L$, where the noise balancing terms $A_{k(noise)}$ and $A_{L(noise)}$ are small positive numbers.

Claim 6 (Cancelled)

7. (Currently amended) The method of claim [4] 1, wherein the color channels are ~~space is~~ CIE tristimulus channels XYZ ~~color space~~, wherein noise balancing terms X_{noise}, Y_{noise}, Z_{noise} are added to the color space and wherein the channels of the color space are modified as follows:

$Y' = TM(Y)$;

$X' = (X + X_{noise}) / (Y + Y_{noise}) \times Y'$; and

Z value of each pixel according to $Z' = (Z + Z_{noise}) / (Y + Y_{noise}) \times Y'$.

8. (Currently amended) The method of claim 7, wherein the noise balancing terms are a triplet of numbers proportional to the white point of the CIE tristimulus ~~channel system~~ channels.

9. (Currently amended) The method of claim [4] 1, wherein the ~~color space is~~ channels are RGB color [space] channels, wherein the channels are modified as follows:

applying a tone mapping function to the G channel of each pixel to generate a tone-corrected relative luminance value G' for each pixel;

transforming the R value of each pixel according to $R' = (R + R_{noise}) / (G + G_{noise}) \times G'$; and

transforming the B value of each pixel according to $B' = (B + B_{noise}) / (G + G_{noise}) \times G'$,

where R_{noise}, G_{noise}, B_{noise} are noise balancing terms.

10. (Currently amended) The method of claim 9, wherein the noise balancing terms are a triplet of numbers proportional to the white point of the RGB color [space] channels.

Claims 11-13 (Cancelled)

14. (Currently amended) The apparatus of claim [11] 18, wherein the pixels are processed independently, whereby a scale factor is specific to each pixel.

Claims 15-17 (Cancelled).

18. (Previously presented) Apparatus for processing pixels of a digital image, the apparatus comprising a processor for applying a tone mapping function to a first color channel of the pixels, computing scale factors for other channels of the pixels, and applying the scale factors to the other color channels of the pixels; wherein the scale factors are computed according to noise balancing terms and changes in values of the first color channel, and wherein the first color channel most closely matches relative luminance response of the human visual system.

19. (Previously presented) The apparatus of claim 18, wherein the scale factors are computed and applied as $A'_k = (A_k + A_{k(noise)}) / (A_L + A_{L(noise)}) \times A'_L$, where $A_{k(noise)}$ and $A_{L(noise)}$ are small positive numbers representing the noise balancing terms, A_L represents the first color channel, and A_k represents one of the other color channels.

20. (Previously presented) The apparatus of claim 18, wherein the noise balancing terms are a triplet of numbers proportional to a color space white point.

21. (Previously presented) An article for a processor, the article comprising memory encoded with data for instructing the processor to process pixels of a color digital image, the processing including applying a tone mapping function to a first color channel of the pixels, computing scale factors for other

channels of the pixels, the scale factors computed according to noise balancing terms and changes in values of the first color channel, and applying the scale factors to the other color channels of the pixels; wherein the first color channel most closely matches relative luminance response of the human visual system.

22. (Previously presented) The article of claim 21, wherein the scale factors are computed and applied as $A'_k = (A_k + A_{k(noise)}) / (A_L + A_{L(noise)}) \times A'_L$, where $A_{k(noise)}$ and $A_{L(noise)}$ are small positive numbers representing the noise balancing terms, A_L represents the first color channel, and A_k represents one of the other color channels.

23. (Previously presented) The article of claim 21, wherein the noise balancing terms are a triplet of numbers proportional to a color space white point.

24. (New) The apparatus of claim 18, wherein the noise balancing terms are the same for all pixels in the image.

25. (New) The article of claim 21, wherein the noise balancing terms are the same for all pixels in the image.

26. (New) The apparatus of claim 18, wherein the color channels are CIE tristimulus channels XYZ, and wherein the color channels are modified as follows:

$Y' = TM(Y)$;

$X' = (X + X_{noise}) / (Y + Y_{noise}) \times Y'$; and

$Z' = (Z + Z_{noise}) / (Y + Y_{noise}) \times Y'$.

27. (New) The apparatus of claim 18, wherein the color channels are RGB color channels, and wherein the channels are modified as follows:

applying a tone mapping function to the G channel of each pixel to generate a tone-corrected relative luminance value G' for each pixel;

transforming the R value of each pixel according to $R' = (R + R_{noise}) / (G + G_{noise}) \times G'$; and

transforming the B value of each pixel according to $B' = (B + B_{noise}) / (G + G_{noise}) \times G'$,

where R_{noise}, G_{noise}, B_{noise} are the noise balancing terms.

28. (New) The article of claim 21, wherein the color channels are CIE tristimulus channels XYZ, and wherein the color channels are modified as follows:

$Y'=TM(Y)$;

$X' = (X + X_{noise}) / (Y+ Y_{noise}) \times Y'$; and

$Z' = (Z + Z_{noise}) / (Y + Y_{noise}) \times Y'$.

29. (New) The article of claim 21, wherein the color channels are RGB color channels, and wherein the channels are modified as follows:

applying a tone mapping function to the G channel of each pixel to generate a tone-corrected relative luminance value G' for each pixel;

transforming the R value of each pixel according to $R' = (R + R_{noise}) / (G + G_{noise}) \times G'$; and

transforming the B value of each pixel according to $B' = (B + B_{noise}) / (G + G_{noise}) \times G'$,

where R_{noise}, G_{noise}, B_{noise} are the noise balancing terms.